Trust Asset Management

Introduction

This chapter addresses basic issues relating to the management of state forest lands. When should the department attempt to sell, acquire or exchange trust lands? What lands should be harvested and when? Should the department attempt to ensure that revenues from these lands remain relatively constant, or is some fluctuation in income to the trusts acceptable? What special ecological features on state forest lands should be preserved, and under what circumstances will the department seek protection for these resources?

The answers to these questions form the foundation for other decisions. As a result, the answers are arranged in logical order below, beginning with general asset management policies relating to the department's land base.

General Management Policies

These policies refer to the overall management of state forest land. They describe the department's policies regarding its land base, land exchanges and land classifications.

As a general rule, the department seeks to create and/or maintain its holdings in large, contiguous blocks, rather than in small, isolated tracts. These blocks allow the department to plan more efficiently, to reduce costs of surveying and road building, and to establish more compatible uses with neighbors.

No. 1: Federal Grant Land Base

▼ **The department will maintain a diversified base of Federal Grant lands, including nonforest properties. In deciding whether to sell, exchange or acquire lands, the department will balance current economic returns and trust benefits with future economic returns and trust benefits.**

Discussion

This policy addresses the issue of when and where it is appropriate for the department to sell, exchange or acquire new Federal Grant lands.

The department will avoid entering into land acquisitions, sales or exchanges that reduce its ability to produce long-term, stable income to the trusts.

To meet this objective, the department will consider selling, exchanging or buying forest land for nonforest land only if the reduction in forest land will be beneficial to current and future trust beneficiaries. State law requires the land bought or exchanged be of equal value. The amount of total acreage in the Federal Grant trust, however, may vary slightly as a result of these transactions.

No. 2: Forest Board Land Base

▼ **The department will perpetuate a productive forest base of Forest Board lands. In deciding whether to exchange lands, the department will assess whether timber harvesting is impractical on these properties and, if so, will attempt to replace them with productive forest lands.**

Discussion

State law precludes the department from selling Forest Board Transfer and Purchase lands, although exchanges are permitted. As a result, the department will perpetuate the forest land base on these properties and seek to exchange those lands where harvesting is impractical. In their place, the department will acquire productive timber land. Thus, the above policy requires the department to concentrate its exchange and land acquisition programs on maintaining and acquiring lands capable of sustaining commercial timber harvesting. Adhering to this policy will ensure that the department will not diminish the productive forest base of the Forest Board lands.

A related issue is the location of productive Forest Board lands near urban areas where the pressure to convert property into suburban or other uses is substantial. In some cases, the department may opt to retain the lands in Forest Board ownership and manage them in ways that address both growth management and timber production needs.

No. 3: Land Classifications

▼ **The department intends to designate those lands and timber resources that are unavailable for harvest as "off-base." All deferrals will be included in this category.**

Discussion

The department classifies state forest land into two general categories: "on-base" and "off-base." On-base lands are those areas capable of producing timber; they are included in department's long-range timber harvest plans. Of the 2.1 million acres covered by the Forest Resource Plan, approximately 1.9 million are currently considered on-base.

Off-base lands are not used in the calculation of the sustainable harvest. Off-base lands typically include areas which cannot produce another timber crop within 80 years of harvest and properties on which harvesting has been deferred because of risk to public resources.

Forest stands that are small, isolated, difficult to reach, too costly to log or are removed from the harvest base to meet some other specific need or objective are also classified as off-base. Approximately 200,000 acres are currently considered off-base.

These land classifications, however, are not permanent. From time to time the department may change the classification as specific stands or sites are evaluated. Some areas currently off-base may be moved on-base, and vice versa.

Harvesting activities will be planned on these off-base lands only when the department believes the harvest will meet a specific department objective. Harvesting off-base lands occurs occasionally where small parcels of off-base lands are mixed with on-base lands. If off-base timber is damaged by storm, fire, insects or disease, it is likely that a strong effort will be made to salvage the timber, though the land is not in the harvest base. This salvage effort will benefit the trusts (by obtaining income from timber sales) and will also reduce the danger that wildfires, insects or diseases would spread to adjacent and more productive areas.

The department's long-standing policy has been ... sustainable, even-flow harvest.

Deferred lands refer to those areas where the department believes harvesting should be postponed or deferred for a specified period of time. At present, about 19,400 acres of state forest land are deferred from harvest and considered off-base.

Included in this category are approximately 15,000 acres of mature natural stands of timber (generally defined to mean trees older than 160 years) in the proposed Olympic Experimental State Forest. The deferral period for this acreage is 15 years. (See Policy No. 6, Western Washington Ownership Groups, pg. 20, for more information on the Olympic Experimental State Forest.) In addition, the department has deferred about 2,000 acres in Old Growth Research Areas for the duration of the Forest Resource Plan (ten years).

Finally, the department has deferred indefinitely approximately 2,400 acres of gene pool reserves (native seed sources). These reserves have been removed from the commercial forest base to ensure that native genetic material, well adapted to local conditions, will be available to the department in the future. (See Policy No. 15, The Genetic Resource, pg. 27.)

Federal regulations require the department to protect the habitat of the northern spotted owl, a threatened species. To comply with these regulations, the department has restricted harvest on 63,250 acres (as of October 1991). This number is subject to change. The department considers these areas to be off-base as long as the regulations are in effect.

HARVEST REGULATION POLICIES

No. 4: Sustainable, Even-Flow Timber Harvest

▼ **The department will manage state forest lands to produce a sustainable, even-flow harvest of timber, subject to economic, environmental and regulatory considerations.**

Discussion

Current state law requires the department to apply "sustained yield" management, which is defined as harvesting timber on a continuing basis without major prolonged curtailment or cessation of harvest. This requirement, however, allows for substantial fluctuations in the amount of timber offered for sale between decades, as long as there is no prolonged curtailment or cessation.

The department's long-standing policy has been to adopt a more rigorous standard: sustainable, even-flow harvest. As a result, the department schedules timber harvests among the ownership groups (discussed in Policy No. 6, pg. 20, and Policy No. 7, pg. 21) with the goal of producing even-flow harvest volumes within each group.

The sustainable, even-flow policy allows the department to harvest approximately the same amount of timber in future years. It prevents major fluctuations between decade levels, and prevents the department from favoring one generation of beneficiary over the other.

The department implements this policy by setting a harvest level for the coming decade. This figure, divided by ten, produces an average annual harvest volume. The department may fluctuate the annual harvest volume up to 25 percent (plus or minus) from the average.

In 1991, the department estimated the average annual harvest level for the coming decade to be 840 million board feet (MMbf). Of this number, 753 MMbf was from Western Washington and 87 MMbf from Eastern Washington. Based on the 840 MMbf level, the department made downward adjustments for the northern spotted owl set asides and other harvest restrictions.

The amount to be harvested in the 1990s is likely to be less than the last decade, when the department sold an average of 756 million board feet per year, equivalent to about 29,000 acres per year. (Approximately 16,000 acres of this total was harvested by clearcut; the remaining 13,000 acres was harvested by partial cut.)

Because of uncertainty in proposed regulations and a forest inventory update now in process, the department has not calculated precise harvest numbers at the present time.

The department's best estimate of what can actually be sold, considering various harvest and operational restrictions, is as follows:

1992:	550 MMbf
1993:	650 MMbf
1994-96:	675 MMbf

These levels are for the fiscal year, which begins July 1 and ends June 30 of the following year. (For example, the 1992 level starts on July 1, 1991, and ends on June 30, 1992.) The department expects to have the new harvest level calculated in early 1993.

The sustainable harvest calculations, when combined with the ownership groups described in Policy No. 6 and No. 7, will result in different rotation (cutting) ages of timber on various department-managed lands.

In Western Washington, for instance, the average rotation age will be 60 years. This policy, the same as the current one, means that as a general rule trees younger than 55 years of age will not be harvested.

There are, however, some exceptions. In order to meet specified objectives, such as diversity, the department may cut some stands as early as 45 years and other stands only when trees reach 100 years.

In the past, the department focused on cutting the oldest timber first while maintaining an even flow of timber on a statewide basis. The department recognizes that economic and regulatory considerations, in addition to long-term timber growth and environmental constraints, should be considered in controlling the scheduling of timber harvest. As a result, the department no longer has a priority to cut the oldest age first.

The department publicly auctions each timber sale. The minimum bid price is based on domestic stumpage prices. Every timber sale must meet financial objectives.

The department's computer model calculates timber volumes available for harvest on a sustainable, even-flow over the next 200 years. Approximately every ten years, or more frequently if necessary, the department uses new inventory information and updated growth models to recalculate the sustainable harvest for the upcoming 200 years and to set harvest levels for the next decade.

Until the decade of 2040, most of the harvest is assumed to come from forests that regenerated naturally after blowdown, wildfire and logging in the late 1800s and early 1900s. By 2040, an increasing amount of harvest will come from forests that were planted by the department and have had some level of management, primarily thinning. By about 2060, a considerable amount of the harvest will come from managed forests that were planted with genetically superior seedlings.

The department believes that managed forests will produce a substantial increase in timber production compared to the forests the department is now harvesting. If managed forests grow as assumed, more timber will be available for harvest in the middle of the next century than is available now.

No. 5: Harvest Levels Based on Volume

▼ **The department's harvest calculations will be based on volume rather than acreage or other considerations.**

Discussion

This policy requires the department to calculate its harvest levels using volume (board feet), the most accurate measure of income to the trusts, rather than acreage. The department believes that volume more closely correlates to value than acreage.

The department is currently conducting a new inventory to better estimate timber volume, quality and productivity.

For the past 25 years, the department has used a simulation technique to calculate the sustainable harvest. Simulation uses a forest inventory data base and appropriate growth models to determine the maximum volume that can be sustained over a finite planning period.

The department's current simulation model runs for 200 years. The department will continue using this model for estimating the sustainable harvest.

No. 6: Western Washington Ownership Groups

▼ **The department will establish a sustained, even-flow harvest level within specified ownership groups in Western Washington, as follows:**

- **Forest Board Transfer lands, where the harvest will be calculated by individual counties.**
- **Federal Grant lands and Forest Board Purchase lands, where the harvest will be calculated by department administrative regions.**
- **The Capitol State Forest, which will be considered a separate ownership group.**
- **The Olympic Experimental State Forest, which will also be considered a separate ownership group.**

Discussion

This policy represents a significant change from existing department practice as it affects state forest lands in Western Washington.

In the past, the department consolidated all Forest Board Transfer lands in Western Washington into one ownership group consisting of 16 counties, with the exception of lands in Clallam County and the Capitol State Forest, which were computed separately.

The department will now set sustainable harvest levels for each individual county in Western Washington. That means that 16 counties, which used to be considered only part of a larger ownership group, will now have a sustainable harvest schedule for Forest Board Transfer lands within that county.

This policy change will help stabilize economic and environmental impacts of timber harvesting for the counties. During a ten-year period, the policy will not significantly affect the overall amount of harvest from Forest Board Transfer lands in Western Washington.

The policy will also affect how the department treats Federal Grant and Forest Board Purchase lands in Western Washington. In the past, the department applied sustained even-flow decisions to two large ownership groups in Western Washington. The department now intends to set harvest levels for five separate regions in Western Washington. Those regions are shown on **Figure 3**, pg. 28.

The policy will stabilize the economic and environmental impacts of timber harvesting within the regions. As a result, region managers will be better able to plan for harvest and related activities on state forest lands. During a ten-year period, the policy will not significantly affect the overall amount of harvest from Federal Grant and Forest Board Purchase Lands in Western Washington.

The policy will stabilize the economic and environmental impacts of timber harvesting within the regions.

The acreage in Capitol State Forest was obtained beginning in 1933 as part of Forest Board Purchase lands. Additional purchases were added to the initial acquisition, and the forest now consists of a 90,000-acre block of land in eastern Grays Harbor County and western Thurston County. The forest had regenerated by natural means in the 1920s. In the late 1930s, however, the department began planting the remaining portions. The current forest has now reached an age of between 60 and 70 years. Because of the relative uniformity of the timber age in the forest, it would have been subject to harvest within several years. After considering local environmental and economic impacts, the department decided to manage the Capitol State Forest as a separate sustained, even-flow unit. Although the forest is in the Central Region, the department will continue to manage it as a separate ownership group.

In addition to the Capitol State Forest, the department intends to create another state forest that will be managed separately from other lands in Western Washington. This area, the Olympic Experimental State Forest, is located on the western portion of the Olympic Peninsula and consists of approximately 264,000 acres. The forest will include Forest Board and Federal Grant lands north of the Queets River and west of Lake Crescent. The area is within Jefferson and Clallam Counties and contains trees with a wide variety of ages.

Creation of the experimental forest was first proposed in 1989 by the Commission on Old Growth Alternatives for Washington's Forest Trust Lands, a citizens group appointed by State Lands Commissioner Brian Boyle. The purpose of the Olympic Experimental State Forest is to gain and apply knowledge about old growth forests and modern commercial forest management. The forest will be managed for both forest commodities and ecological values. It contains approximately 60,000 acres of mature natural stands, of which about 15,000 acres will be deferred from cutting for 15 years. The department will decide at that time whether to harvest the acreage or not.

Federal laws and regulations, such as those affecting the northern spotted owl, may change the scope and activities allowed in the forest and may also affect the schedule for implementing the commission recommendations. As a result, it is not possible for the department to say precisely when the forest will be established.

Another sustained-yield unit, though not mentioned above as a separate ownership group, is the 15,000-acre Tiger Mountain State Forest in eastern King County. The department's management plan for the forest requires it to follow a separate harvest schedule for the area. The department's South Puget Sound Region, where the forest is located, will harvest timber according to this schedule.

A separate sustainable harvest schedule is not calculated for individual conifer or hardwood tree species. However, unlike conifer species, red alder stands begin to deteriorate after age 60, so a special effort will be made to harvest stands of this species before volume or quality loss occur.

No. 7: Eastern Washington Ownership Groups

▼ **The department will establish sustained, even-flow harvest levels within specified ownership groups in Eastern Washington, as follows:**

- **Yakima River**
- **Klickitat**
- **Highlands and South Okanogan**
- **Arcadia**
- **North Columbia**

Discussion

The policy explains and clarifies current department practice. It will not change the department's Eastern Washington ownership groups.

The area is currently split into five separate sustainable harvest groups for which individual harvest levels are calculated.

Within each of these groups, the department determines a harvest for a mixture of even-aged and uneven-aged forests. The resulting rotation age is approximately 70 to 80 years.

The harvest is calculated using Eastern Washington growth simulation models developed by the department. Continuous Forest Inventory Plots (CFIs) established in each district provide the growth and yield information to run the harvest schedule models. The CFIs supply information for height and diameter increment, defect, breakage and mortality.

The total Eastern Washington harvest averages approximately 87 million board feet (MMbf) from all five ownership groups.

No. 8: Special Forest Products

▼ **The department will encourage and promote the sale of special forest products where appropriate and will market them in a manner consistent with the overall policies of this plan.**

Discussion

In the last five years, the department has seen a marked increase in demand for special forest products such as evergreen boughs, salal greens, mushrooms, tree bark and moss. Pacific yew bark, for example, which is used in cancer research, is currently in demand.

The growth in these industries has occasionally created special challenges for the department. Some new materials are sought by entrepreneurs and scientists on short notice. Other products may threaten limited resources.

Before deciding to sell these items, the department will analyze the value of the product in light of the environmental impacts of harvesting. The department intends to develop consistent policies and procedures for selling, leasing and marketing special forest products. The department also intends to develop clear guidelines that protect the environment, ensure the best return to the trusts and eliminate inconsistent practices among the department's regional offices.

Department decisions regarding the harvesting of special forest products will take into consideration applicable treaty provisions with Native American tribes and the goals of the department's tribal policy (contained in **Appendix F**).

Trust Asset Protection Policies

No. 9: Forest Health

▼ **The department will incorporate forest health practices into the management of state forest land to bring about a net benefit through the reduction or prevention of significant forest resource losses from insects, diseases, animals and other similar threats to trust assets.**

Discussion

Maintaining the health and productivity of state forests is essential if the department is to discharge properly its responsibility as trustee of state forest lands. Resources such as timber, soil, water, and wildlife habitat may be threatened by insects, diseases and animals.

To minimize these risks, the department intends to adopt practices that maintain the health of state forests.

The department will balance economic, biological, environmental, and social views in determining the best approach to prevent damage to trust assets. At present, the department's Integrated Pest Management process is the decision-making tool for implementing the above policy. The process is used to decide what actions, if any, the department will take to reduce or prevent damage to state forest land.

Chemical pesticides, the least-preferred alternative, are used only when other measures will not provide acceptable protection or prevent significant resource losses. During the last ten years, the department did not use any aerial insecticides, though the department believes this option must be available in certain rare situations to maintain state forest health.

The department recognizes that many of the once-thought "detrimental effects" of insects and disease to a stand may be increasingly tolerated without substantial economic risk if they are considered on a broader, geographic scale.

Small levels of pests or insects, for instance, may not pose a significant loss to trust assets and, in some instances, may promote a healthy forest. The policy requires the department to make a determination regarding the cost-effectiveness of any treatment prior to use.

No. 10: Fire Protection

▼ **The department will supplement the state's fire protection program to bring about a net benefit through the reduction of significant resource losses from wildfire on department-managed land.**

Discussion

State law requires the department to protect both state and private forest lands from wildfire. Thus, the department's regulatory duties in this area affect large areas of private holdings not covered by the Forest Resource Plan.

The department recognizes there are cost-effective opportunities to decrease wildfire damage by taking preventive measures beyond what is required by law.

Department managers will consider supplemental protection measures for state forest land to reduce losses from wildfire when the cost of these practices is justified. These measures will include the following general activities:

- Prevention, which involves identifying, planning and implementing prevention efforts, possibly with adjacent land owners, to minimize wildfire impacts on state forest land.

- Pre-suppression, which involves promoting increased use of wood residue and decreasing the accumulation of potentially hazardous fuel, which reduces the risk of spreading wildfires.

FINANCIAL POLICIES

No. 11: Managing On-Base Lands

▼ **The department will manage on-base forest lands at different levels of intensity depending on biological productivity and economic potential. Investment decisions will be made according to expected returns.**

Discussion

This policy directs the department to assess the biological and economic potential of its management practices at specific sites before making decisions.

For this plan, investment decisions refer to the department's internal investments in state forest land. These investments include items such as road construction and maintenance, and the cost to thin or prune trees.

Under this policy, the department will select management practices on a site-by-site basis rather than employing a uniform standard set of management practices across all sites and regions.

The department believes this policy will give it flexibility to produce long-term, stable income. It may, however, require more silvicultural and ecological expertise and time on the part of local land managers. The department is committed to ensuring that its managers receive the proper information and financial support to carry out this policy.

No. 12: Annual Review of Financial Assumptions

▼ **The department will review and adjust annually its financial assumptions used in management decisions.**

Discussion

In the past, the department established a set of financial assumptions, including a fixed interest and discount rate, and attempted to formulate a comprehensive plan based on those assumptions. The department recognizes that federal and state laws and regulations, as well as changes in general economic conditions, can significantly impact regional forest product markets. As a result, the department will now evaluate its financial assumptions once a year.

The policy directs the department to review annually the prices, costs, interest rates and other assumptions used in its investment analyses.

Special Lands Policies

No. 13: Special Ecological Features

▼ **The department will identify state forest lands with special ecological features that fill critical gaps in ecosystem diversity, and it will seek legislation and funding to remove these lands from trust ownership.**

Discussion

Special ecological features take a variety of forms, such as some older forest stands, uncommon native plants and exceptional wetlands. The department intends to remove certain lands with special ecological features from trust land status with legislation and funding.

Based on past experience, the department anticipates that public funds will be made available periodically for this purpose. It intends to use these funds to transfer lands with special ecological features from trust ownership to protective status.

The department has identified many such features for protection and has created an administrative division, the Land and Water Conservation Division, to manage these sites as Natural Area Preserves (13,599 acres) or as Natural Resources Conservation Areas (42,244 acres). In total, 55,843 acres at 56 sites have been set aside in this program. These sites were acquired from both public and private landowners. The preserve and conservation areas, which contain some old growth timber stands, are managed in a separate program and are not addressed in this plan. (See **Appendix E** for a list of these properties.)

The department is currently working to acquire certain scenic lands along the Interstate 90 corridor in Western Washington. The project, known as the "Mountains to Sound Greenway," involves purchasing trust lands and placing them in the Natural Resources Conservation Areas.

Transfer of other special trust sites to the Land and Water Conservation Division depends on the availability of funding. Identification and interim protection of those sites, however, can occur prior to completing the transfer.

The word "critical" in the policy refers to a relatively narrow range of features or sites located in strategic areas. These features may be adjacent to already-protected areas or they may contain features not represented in existing protected areas.

Special ecological features take a variety of forms, such as some older forest stands, uncommon native plants and exceptional wetlands.

No. 14: Old Growth Research Area Deferrals

▼ **During this planning period, the department will continue to defer from harvest certain old growth research stands in Western Washington to maintain the ability to acquire information on ecological relationships which may affect intensive timber management.**

Discussion

In the past, the department has deferred from harvest certain old growth forest stands in Western Washington for potential research purposes. (An old growth research area is more than 80 acres in size and contains trees at least 160 years old. These areas were called "seral stage stands" in the 1984-1993 Forest Land Management Program.)

To date, the department has deferred about 2,000 acres in 12 sites for Old Growth Research Areas. It plans to continue this deferral for the next ten years.

Deferring (postponing) harvesting on these sites will provide the ability to conduct research that will likely benefit the trusts. The department may conduct this research or make the sites available for outside scientific research. Because designation of the sites took longer than originally anticipated, research activities have yet to begin. Research subjects include wildlife, ecology and forest productivity.

No. 15: The Genetic Resource

▼ **The department will protect and enhance a diverse gene pool of native trees on state forest lands to ensure well-adapted future, commercial forests.**

Discussion

Native tree species found in Washington forests have a wide variety of genetic variation and are well adapted to local environments. The department recognizes that it is important not to degrade this gene pool by poor management practices.

The department believes this genetic resource must be considered in its management decisions if it is to gain optimum benefits from future forests. Thus, the department considers the genetic pool to be one of the trust assets that it seeks to protect.

To accomplish those goals, the department has deferred indefinitely from harvest about 2,417 acres of gene pool reserves (native seed sources). Gene pool reserves are 50 years of age or more but are not necessarily mature timber. These gene pool reserves have been removed from the commercial forest base to ensure that native genetic material, well adapted to local conditions, will be available to the department in the future.

The department's strategy is to:

- Maintain existing gene pool reserves and establish new reserves to preserve a portion of native gene pool for future uses.
- Conduct a genetic improvement program to produce faster-growing and more pest-resistant trees which are adapted to specific areas of the state. This part of the strategy includes maintaining a seed orchard that uses genetic material from across Western Washington.
- Work with federal and state agencies, as well as with private landowners, to gain access to a wider range of gene plasm for current and future forests in both Eastern and Western Washington.
- Use the best-adapted and most vigorous trees for reforestation (natural or planted).

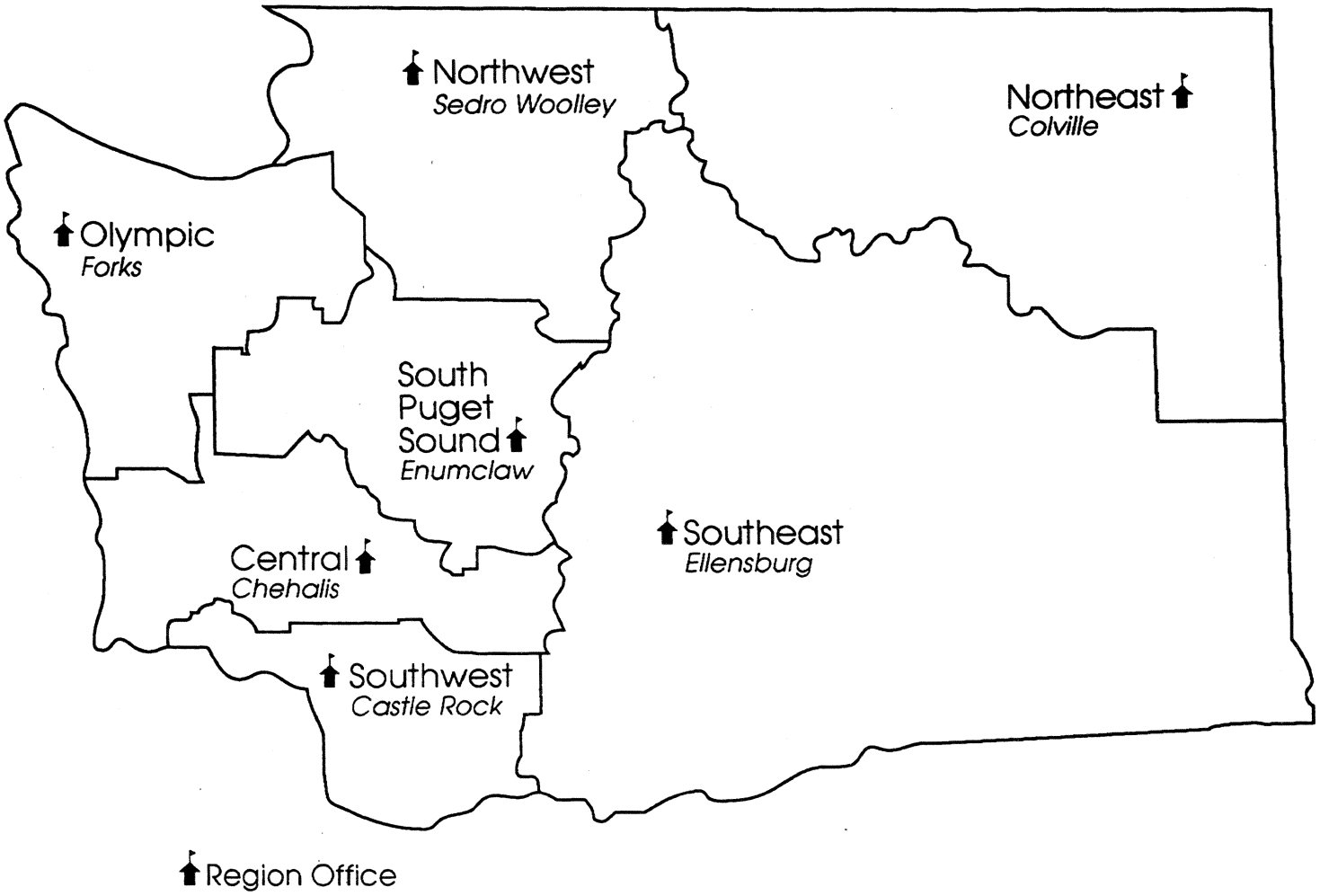

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Figure 3: *Administrative Regions of the Department of Natural Resources.*